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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,405	11/28/2003	Takashi Suzuki	000409-073	7172

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EXAMINER

SCHINDLER, DAVID M

ART UNIT	PAPER NUMBER
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2862

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/722,405

Applicant(s)

SUZUKI ET AL.

Examiner

David Schindler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14 and 17-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14 and 17-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the communication filed 2/16/2006.
2. It is noted to Applicant that a copy of the reference EP 0916953 A1 to Gotoh et al. which has already been considered is being placed on record with this Office Action.

Allowable Subject Matter

3. Upon further consideration, the allowance of claims 14, 17, 18, and 19 is withdrawn in favor of the rejection found below.

Claim Objections

4. Claims 14 and 17 are objected to because of the following informalities:

As to Claim 14,

The phrase "in the vicinity including" on line 21 is awkward as it is not clear what vicinity the above phrase is referring to.

The phrase "the other side of the second yoke" on the third to last line lacks antecedent basis.

As to Claim 17,

The term "te" on the fourth to last line is unclear. For the purpose of examination, the Examiner is interpreting the above term to be "the."

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 14, 17, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Weh et al. (herein referred to as "Weh") (DE 3237843 A1).

As to Claim 14,

Weh discloses a first magnet having a first pole and a second pole (Figure 1), a second magnet having a first pole and a second pole and positioned near the first magnet, the first pole of the second magnet facing the second pole of the first magnet, and the first pole of the first magnet being the same as the first pole of the second magnet, and the second pole of the first magnet being the same as the second pole of the second magnet (Figure 1), a magnetic detecting element (13) in the vicinity of the first and second magnets (Figure 1), wherein a magnet flux density detected in a zone including the magnetic detecting element while a detected body (15) is away from the position detecting sensor more than a predetermined distance is greater than a magnetic flux density detected in the zone while the detected body is positioned near at least one side of the position detected sensor by the predetermined distance (Figure 1 / note the flux lines), a first yoke (3) positioned between the first magnet and the second magnet (Figure 1), a projecting portion (middle projecting portion of (1)) extending at the first yoke in a direction at approximately right angles with a line extending between the first and second magnets (Figure 1), a second yoke (2) positioned so as to dispose the magnetic detecting element between the second yoke and a tip end of the projection portion (Figure 1), a third yoke (1) oriented near the projecting portion at the second

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pole side of the second magnet and at one side of the second yoke (Figure 1), the magnetic detecting element being positioned in the vicinity including a line extending between the tip end of the projecting portion and the second yoke (Figure 1), and wherein the detected body approaches to the first pole side of the first magnet and the other side of the second yoke (Figure 1), and wherein the third yoke is positioned in parallel with the extending direction of the projecting portion (Figure 1).

As to Claim 17,

Weh discloses a first yoke (1) including a main body portion and a projecting portion (middle projecting portion of (1)) extending from the main body in a direction at right angles to the main body (Figure 1), the projecting portion possessing a tip end (Figure 1), a first magnet (5) disposed at one end of the main body (Figure 1 / bottom end), the first magnet possessing a north end and a south end (Figure 1), a second magnet (4) disposed at an opposite end of the main body (Figure 1 / top end), the second magnet possessing a north end and a south end (Figure 1), a second yoke (3) positioned so that a space exists between the second yoke and the tip end of the projecting portion (Figure 1), a third yoke (see note 2 below) positioned parallel with the projecting portion (Figure 1), a magnetic detecting element (13) disposed in the space between the second yoke and the tip end of the projecting portion (Figure 1), first magnetic flux from the first magnet travels from the north end of the first magnet towards the second yoke, then flows back to the south end of the first magnet via the magnetic detecting element and the projecting portion (Figure 1 / note flux lines), second magnetic flux from the second magnet travels from the north end of the second

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magnet towards the second yoke via the projecting portion and the magnetic detecting element, then flows back to the south end of the second magnet (Figure 1 / note flux lines), lines of magnetic flux from the first magnet flow in an opposite direction to the lines of magnetic flux from the second magnet at the magnetic detecting element (Figure 1 / note flux line double arrows that are located to the left of (13)), the magnetic fluxes from the first and second magnets passing through the magnetic detecting element are cancelled with each other when the magnetic body is positioned at a place near or adjacent to the position detecting sensor at which the first magnetic flux passes through the magnetic body (Figure 1), the magnetic flux passing through the magnetic detecting element becomes substantially greater than a predetermined threshold value when the magnetic body is positioned away from the position detecting sensor ((Figure 1) and (see note 1 below)).

Note 1: Note that the Examiner is interpreting the predetermined threshold value to be zero detected flux.

Note 2: Note that the third yoke is interpreted to be the top projecting portion of (1) for the claim 17 / claim 18 rejection, and the third yoke is interpreted to be (2) for the claim 17 / claim 19 rejection.

As to Claim 18,

Weh discloses the third yoke (top projecting portion of (1)) is formed integrally with the second yoke to form a substantially L-shaped configuration (Figure 1).

As to Claim 19,

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Weh discloses the third yoke (2) is separated from the second yoke by a predetermined distance (Figure 19).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weh et al. (herein referred to as "Weh") (DE 3237843 A1) in view of Gotoh et al. (EP 0916953 A1).

As to Claim 20,

Weh discloses as explained above.

Weh does not disclose the first and second magnets at both ends of the main body differ from each other in at least one dimension.

Gotoh et al. discloses the first and second magnets at both ends of the main body differ from each other in at least one dimension (Figure 1).

It would have been obvious to a person of ordinary skill in the art to modify Weh to include the first and second magnets at both ends of the main body differ from each other in at least one dimension as taught by Gotoh et al. in order to reduce the amount of material use and thus reduce the device cost.

As to Claim 21,

Weh does not disclose the at least one dimension is a thickness of the first and second magnets in an extending direction of the main body of the first and second yoke.

Gotoh et al. discloses the at least one dimension is a thickness of the first and second magnets in an extending direction of the main body (32) of the first and second yoke (Figure 1).

It would have been obvious to a person of ordinary skill in the art to modify Weh to include the at least one dimension is a thickness of the first and second magnets in an extending direction of the main body of the first and second yoke as taught by Gotoh et al. in order to reduce the amount of material use and thus reduce the device cost.

As to Claim 22,

Weh does not disclose the at least one dimension is a length perpendicular to an extending direction of the main body of the first yoke.

Gotoh et al. discloses the at least one dimension is a length perpendicular to an extending direction of the main body of the first yoke (Figure 1).

It would have been obvious to a person of ordinary skill in the art to modify Weh to include the at least one dimension is a length perpendicular to an extending direction of the main body of the first yoke as taught by Gotoh et al. in order to reduce the amount of material use and thus reduce the device cost.


Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Schindler whose telephone number is (571) 272-2112. The examiner can normally be reached on M-F (8:00 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DS


David Schindler
Examiner
Art Unit 2862


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